

ANNUAL INDEX

January—December 1968

MONTH PAGE

Assembly Fastening Joining	Adhesive Cuts M.60 Stud Assembly Costs, Improves Reliability	Apr	69
	The Explosive Bonding Process: Applications and Related Problems	May	98
	Highly Mechanized Differential Assembly Line at Ford	Oct	120
Computers	Computers as Machine Tools and How They Work	June	123
	Computer Assisted Tolerance Systems	Oct	116
Cutting Tools	Ejector Drill Cuts Drilling Time 80 Percent	May	61
	Double Cutting, Facing and Boring Tool	May	136
	Increased Length of Cutting Edges on Hollow Mill Flutes	Sept	133
Economics In Metalworking	Energy-Absorbing Mounts Permit High-Precision Machining in 100-Year-Old Building	Jan	65
	All-Purpose Machine Solves Plant Expansion Problem	Feb	89
	Adhesive Bonding Improves Bonding and Reduces Manufacturing Cost	Feb	95
	Decision Tree Methodology Answers "Retain or Purchase" Question on Equipment	Mar	130
	Excess Cost of Tubing Over Bar Stock Justified By 75 Percent Production Savings	Apr	71
	Hydraulic Pressbrake Saves 15 Percent Production Time Plus 9,000 Feet of Welding	Apr	73
	Plastic Taper Shank Improves Drill Life	Apr	245
	Jig Mill Productivity Increased 85 Percent	May	63
	Urethane Rolling Machine Slashes Production Time	June	64
	Cost of Jet Engine Part Shot Down by Extruded Shape	July	67
	The Arithmetic of Business and Industry—Part I	Aug	116
	MTBB Economic Forecast	Sept	98
	The Arithmetic of Business and Industry—Part II	Sept	108
	Four Phases to Modernization	Sept	120
	One Hour Knocked Off Machining Time on Cast Iron Gear Boxes	Oct	69
	How to Cure Ailing Wage Incentive Plans	Nov	124
	Retrofit Spells Profit in Machining Complex Aircraft Part	Dec	75
	Watch Your Learning Curves	Dec	120
Exhibitions	British Machine Tools Take a Giant Step	Oct	98
	"New Generation" Machine Tools Exhibited at Britain's International Machine Tool Exposition	Oct	101
	4th Japan International Machine Tool Fair	Dec	98

ANNUAL INDEX

January—December 1968

MONTH PAGE

Assembly Fastening Joining	Adhesive Cuts M.60 Stud Assembly Costs, Improves Reliability	Apr	69
	The Explosive Bonding Process: Applications and Related Problems	May	98
	Highly Mechanized Differential Assembly Line at Ford	Oct	120
Computers	Computers as Machine Tools and How They Work	June	123
	Computer Assisted Tolerance Systems	Oct	116
Cutting Tools	Ejector Drill Cuts Drilling Time 80 Percent	May	61
	Double Cutting, Facing and Boring Tool	May	136
	Increased Length of Cutting Edges on Hollow Mill Flutes	Sept	133
Economics In Metalworking	Energy-Absorbing Mounts Permit High-Precision Machining in 100-Year-Old Building	Jan	65
	All-Purpose Machine Solves Plant Expansion Problem	Feb	89
	Adhesive Bonding Improves Bonding and Reduces Manufacturing Cost	Feb	95
	Decision Tree Methodology Answers "Retain or Purchase" Question on Equipment	Mar	130
	Excess Cost of Tubing Over Bar Stock Justified By 75 Percent Production Savings	Apr	71
	Hydraulic Pressbrake Saves 15 Percent Production Time Plus 9,000 Feet of Welding	Apr	73
	Plastic Taper Shank Improves Drill Life	Apr	245
	Jig Mill Productivity Increased 85 Percent	May	63
	Urethane Rolling Machine Slashes Production Time	June	64
	Cost of Jet Engine Part Shot Down by Extruded Shape	July	67
	The Arithmetic of Business and Industry—Part I	Aug	116
	MTBB Economic Forecast	Sept	98
	The Arithmetic of Business and Industry—Part II	Sept	108
	Four Phases to Modernization	Sept	120
	One Hour Knocked Off Machining Time on Cast Iron Gear Boxes	Oct	69
	How to Cure Ailing Wage Incentive Plans	Nov	124
	Retrofit Spells Profit in Machining Complex Aircraft Part	Dec	75
	Watch Your Learning Curves	Dec	120
Exhibitions	British Machine Tools Take a Giant Step	Oct	98
	"New Generation" Machine Tools Exhibited at Britain's International Machine Tool Exposition	Oct	101
	4th Japan International Machine Tool Fair	Dec	98

Forming	Forming on Tandem Press Brakes Eliminates	Jan	63
Blanking	Welding	Jan	98
Piercing	Sheetmetal Forming: Introduction to the Equipment, the Methods, and the Parts Involved	Jan	100
Shearing	Press Brakes . . . Basic Metal Forming Machines	Jan	102
	Four-Slides . . . Speed Plus Precision	Jan	103
	Rolling for Forming and Bending	Jan	106
	Spinning, Spinning, Spinning	Jan	108
	Increased Efficiency and Lower Cost Through Flow Turning	Jan	111
	Let's Take a Look at the Hydroform Process	Jan	114
	Explore the Characteristics of Magnetic Forming	Jan	116
	A Venture into Explosive Forming	Jan	118
	A Look at Stretch Forming, Forming, Stretch Draw Forming	Jan	122
	Low Cost Plus High Quality Equals Urethane Forming	Jan	124
	Don't Overlook Fluid Forming	Jan	125
	The Flexibility of Rubber Pad Forming	Jan	126
	Last But Not Least—Press Die Forming	Feb	118
	Nitrogen Press Cushion Saves Forming Operations	Feb	122
	Interchangeable Cams Increase Production of Multi-Station Transfer Presses	Feb	138
	Five Parts From One Die—Standardized Die Plates Make it Possible	Feb	148
	Die Produces Straight and Angular Bends	Mar	73
	Versatility and Speed of Press Bending Result in Low-Cost Tube Forming	Mar	75
	Circular Sheetmetal Parts Without Scrap Loss	Mar	114
	The Many Facets of Sheetmetal Die Forming	Apr	67
	Short Run Fabrication Cost Conquered	May	120
	Metal Spinning in the Space Age	May	126
	Upside Down Urethane Die	May	134
	Forming Die Features Side Mounted Stripper	Aug	69
	Pneumatic Press Doubles Circuit Board Production	Sept	65
	100 Different Limosine Body Parts with Single Press Brake	Sept	71
	Isothane Female Dies Reduced Forming Cost	Oct	71
	One Press is Complete Production Line for 16 Auto Parts	Nov	67
	Wrinkle-Free Bending Across Corrugations with Urethane Die	Nov	104
	Electroshape . . . A Growing Role in Metal Forming		
Grinding	Grinding and Cutoff in One Setup	Feb	147
Finishing	Grooved Wheels Run Cooler	Apr	243
Deburring	Grinding Splined Shafts in Centerless Grinder	July	135
	Crush-Form Grinding Gains Momentum	Sept	101
	Pollution-Free Air is Essential Part of Quality Control at Grinding Specialist	Oct	125

**Industrial
Engineering
Data**

How the Air Force Machinability Data Center Can Help You	May	130
Metallurgical and Heat Treating Terms	June	131
Machining Data—Peripheral End Milling with Numerical Control	July	130
Machining Data—Peripheral End Milling with Numerical Control	Aug	130
Machining Data—Peripheral End Milling with Numerical Control	Sept	130
Machining Superalloys with Carbide Materials	Oct	130
Sheet Metal Drawing Data	Nov	130
Design Properties of Materials	Dec	130

**Inspection
Quality
Control
Measurements**

Checking Surface Finishes—Evaluating the Optical Light-Cut Section Microscopic Method	May	112
Torque and Brake Test Unit	May	136
Rotary Table and Coordinate Measuring Machine Teamed for Timesaving	Aug	120
Penetrating Eye Inspects Rotor Blade	Oct	67
Essential Part of Quality Control at Grinding Specialist	Oct	125
Camshafts Frozen to Maintain Critical Dimensions	Nov	73

**International
Roundup**

Germany: N/C Turning at Hannover	Jan	80
United Kingdom: A Glance at 1967 Machine Tool Industry; Locating and Mounting Machines; Versatility of Universal Slideway Grinding Machine; High Stock Removal Claimed on a Special-Purpose Lapping Machine	Jan	87
Poland: A Universal Transistorized Analogue Computer; Pressure Head for Horizontal Drilling Machine; Induction Method for Heating the Fittings for Diamond Tools	Jan	89
Japan: Metal Forming Presses	Jan	91
United Kingdom: Big Order from Russia for British-Built Machine Tools; Elimination of Model, or Prototype Stages; Holes as Deep as 10 Feet and Up to 6 Inches in Diameter	Feb	103
Germany: Tool Magazines for Lathes, Chuckers, and Turning Machines	Feb	105
Japan: Miyano Automatic Automatic Lathe	Feb	107
United Kingdom: Fluidic Control of a Hydraulic System—Without Electronics; New Herbert Ingersoll Machine Tool Plant at Deventry; Minister of Technology Reveals Details of a New Scheme for Underwriting Part of the Financial Risk in Building Machine Tools for Stock	Mar	91
Germany: Thirty-Machining Centers Displayed at Hannover	Mar	94

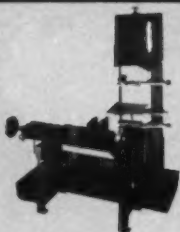
**International
Roundup**
(continued)

Japan: Japan's Goals for Future Production of Machine Tools; Korean Machine Tool Team Visits Tokyo for Inspection Tour of Finding Japanese Machine Tool Builders; N/C Machines; Japanese Machine Tool Trade Association	Mar	101
United Kingdom: Despite Jump in Orders for Machine Tools, British Take a Pessimistic Outlook	Apr	81
Germany: Chipless Machining Grows Slightly in Proportion over Chip-Producing Machines in Past Few Years; Domestic Orders for Machine Tools in West Germany decreased in First Half of '67	Apr	87
Japan: High-Speed Steel Tools Make Great Stride in Last Ten Years	Apr	89
United Kingdom: The Possibility That Machine Tool Demand Would Pick Up Later This Year; London Tool Exposition; N/C Role in Metal Cutting; Spendings on Machine Tool Production	May	73
Germany: New Machining Centers Change Multiple-Spindle Heads Rather Than Individual Tools; Projected Provides Optical Inspection; German Industrial Recession	May	77
Japan: Report on Imported Machine Tools; Metal Cutting Tools Show Upward Trend	May	81
United Kingdom: Orders from UK Customers for New Machine Tools up in January; Survey of Business Opinion; Application of Fluidics to N/C Machines	June	81
Japan: American Machine Tool Delegation Visits Japan; Japanese Technology Increased to the Point They Now Export It	June	85
Germany: The German Economy; Production of Dies and Taps; Cutting Hard and Brittle Materials; Deep Hole Drilling	June	89
United Kingdom: New Plant Designed Specifically for Production of Unique Machine Tools; Upturn in Capital Investment; British Manufacturers Back Metric System	July	81
Germany: Comparison of Offered Goods at Fairs: Swiss Goods at Swiss Sample Fair in Basel	July	85
Japan: Merges and Business Tie-ups; Production Raised; Free Import of Know-How	July	88
Germany: Moderate Business Boom; Importance of Skilled Workers; Japan Trumpeting Attack on European Market	Aug	81
United Kingdom: Machine Tool Makers Open Discussions with Government Representatives in an Effort to Increase Funds for Machine Tools	Aug	85

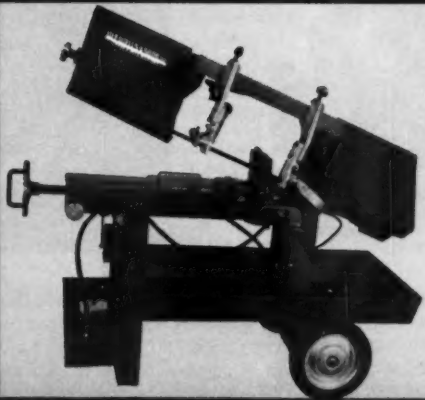
**International
Roundup**
(continued)

Japan: Machining Centers Being Widely Accepted; Will Continue to Seek Overseas Market	Aug	89
Germany: All Branches of the Machine Tool Industry Were Surprised by What They Saw at International Machine Tool Exhibition in London	Sept	81
United Kingdom: Demand for Home Made Products Shows Improvement	Sept	85
Japan: Need for Efficient Utilization of Nation's Labor Resources Emphasized	Sept	89
United Kingdom: British Rationalization Criticized; New Gaging System; Millers and Other Machine		

SMALL PRICE TAG BIG 7"x11" CAPACITY



MODEL
A-7
METAL CUTTING
BAND SAW



...PLUS VARIABLE HYDRAULIC CONTROL FOR CUTTING HEAD FEED.

More machine for your money! Big 7" capacity costs you no more. Rugged steel frame construction. Precision patented saw guides. Blade speeds 60-90-140-180 FPM. Swivel vise, rotary blade brush, automatic shut-off, stock stop bar. Wet and dry cutting models. Table attachment for vertical use. Optional: Handle and rubber tire wheels, automatic blade tension indicator, magnetic switch, enclosed motor, stock stand. Write for FREE CATALOG or phone (616) 279-5123.

W.F. WELLS & SONS, Inc. / NORTH ON U.S. 131
THREE RIVERS, MICH. 49093

Circle 518 on reader information card

**International
Roundup
(continued)**

Tools That Can be Fitted with an Electrical Discharge Machining Head for More Versatility	Oct	81
Germany: Swiss Tool Statistics; Sale Situation in Germany has Changed for Better	Oct	85
Japan: Economic Expansion Last Year; Czech Trade Mission Reveals that Two Japanese Auto Makers Have Offered to Export Technical Know-How for Automobile Production in Czechoslovakia; Japax Co. Exports Electrical Discharge Sintering Technique	Oct	89
United Kingdom: Separation of Charles Churchill and Cincinnati Milling Machine Co.; Economic Status of British Machine Tool Industry	Nov	81
Germany: Germany's Machine Tool Production for First Half of 1968; More Gains Seen	Nov	85
Japan: Japanese Import Market is Now a Major Sales Outlet for the Production of American Metalworking Industries; Facing an Acute Labor Shortage; January-March Period of 1968 Up 44 Percent Over Same Period in 1967	Nov	87
United Kingdom: Larger Life Obtained with Carbide Tipped End Mills Machining IMI 680 Titanium; Special Facilities for Financing Machine Tool Purchases Extended	Dec	81
Germany: Order Receipts for, and Output of German Machine Tools Increasing; Scanning and Measuring Machines Given Responsibility for Shortening Lead Time	Dec	85
Japan: The 4th Japan International Machine Tool Fair; A General View of the Japanese Economy	Dec	89

**Jigs
Fixtures
Gages
Accessories**

Crossline Center Punch	Jan	131
Spindle Plug Aligns Chuck	Jan	131
Ejector Pin Used to Remove Casting from Studs	Jan	133
Magnetized "T" Permits Fast Setup	Jan	133
Expanding Mandrel Used as Drill Jig	Feb	149
Constant-Pressure Blank Holder for Drawing Dies	Mar	149
Portable Positioning Fixture	Apr	245
Floating Quill Aids in Machining Grooves of Uniform Width in Materials of Varying Thickness	June	135
Carbide Drill Pointing Apparatus	June	135
Oil Groove Guide	June	136
Radius-Forming Die	June	138
Pendulum Type Gage Indicates Correct Tool Height	July	136
Magnet Holds Clamp in Place	July	136
Machine Tool Spindle Reference Fixture	Aug	133
Vernier Movement Made Quickly and Accurately	Aug	135
Self-Centering Reamer for Deep Holes	Aug	135
Flycutter Set Gage	Aug	137
Spring-Loaded Indicator Stop	Sept	134

Jigs
Fixtures
Gages
Accessories
(continued)

Spherical Grinding Fixture	Oct	132
Dropped Weight Center Punch	Oct	132
Special Quick Setting Clamps	Oct	134
Wedge Holds Workpiece in Place for Drilling	Oct	135
Level Alignment Tool	Nov	132
Adjustable Center-Indicating Fixture	Nov	132
Self-Centering Mounting Plates	Nov	134
Chuck Fixture Holds Four Parts Simultaneously	Dec	132
Old Drills Converted to Dead Centers	Dec	134
Ball Used With Short Punch to Help Drive Out Pin	Dec	136

Lasers

Laser Calibration of Machine Tools—How it Works	Feb	130
Taming the Mighty Laser	Aug	104
Automatic Laser Machine Tools a Reality	Nov	120
Laser Slashes Diamond Drilling Time	Dec	73

Machine
Design

Precision Limit Switches Improve Field Maintenance on Die Casting Machine	Jan	67
Upside-Down Urethane Die	May	126
Forming Die Features Side Mounted Stripper	May	134
Unique Die Set Bushing Aids in Large-Volume Production of High-Quality Intricate Stampings	June	121
Special Skip Turning Operation Contours Aluminum Cylinder	Aug	71
Vibration Damping in Metalworking	Aug	125
Gear Making—the Compatibility of Plastic and Metal	Sept	114
Cutoff for Thin Wall Fabricated Tubing on Cones	Sept	136

Machining

Production of Replacement Parts for Humans Doubled	Jan	63
Lathes Double Production of Die Cast Rotor and Eliminates Distortion	Feb	92
Index Gun Drilling Machine Eliminates Many Second Operations	Feb	142
Grinding and Cutoff in One Setup	Feb	147
Dimensioning Keyways	Feb	147
Switch to Superior Machining Stainless Steel Boosts Tool Life 150 Percent	Mar	77
Shaft Relief Shim Permits Slight Taper	Mar	147
Wire Aids Screw Chucking in Secondary Machining	Mar	149
Four-Axis N/C Machining Center Fed from Thirty-two Tool Magazine	Apr	106
Jig Mill Productivity Increased 85 Percent	May	63
Small Pattern . . . Large Part on 3-D Planer	May	108
Single-Point Threading is Easily Justified—It Has Everything Going for It	June	114
Simplified Contouring with Mill-Drill Table	Aug	109
Free Abrasive Machining in—Grinding and Turning Out	Sept	67

Machining
(continued)

Tape Controlled Lathes Halve Cost of Turning		
Machine Tool Parts	Sept	69
Boring Machines Leave the World of		
Specialization	Sept	126
Free-Machining Stainless Steel Improves Screw		
Machine Operations	Nov	69
Automated Precision Turning Provides		
Repeatability, Tight Tolerances	Nov	71
Machinability of Polyurethane—Speeds, Feeds		
and Tooling	Nov	114
Multiple Spindle Boring Boosts Valve Body		
Production	Dec	78
Melt-Away Tooling for Thin-Section Machining	Dec	111

Machining
Centers

Numerically Controlled Machining Centers—The		
Dynamics of Change in Manufacturing Methods	June	98
Two Rotary Tables for Flexibility	July	101
More Production and Better Accuracy at Detroit		
Diesel	July	102
Six-to-One Cost Reduction—Eight Operations		
Combine Into One	July	104
Machining Center Now Part of Auto Production		
Line	July	106
One Machining Center Equals Three Machines	July	109
One Setup Replaces Four	July	110
Capacity, Response, Economy Tip the Scales	July	111
Matched Machine and Control Give Complete		
Compatibility	July	114
Transmission Cases and Covers Machined		
to Match	July	117
Machining Center Justified on Part Quality		
Alone	July	119
Process Development at IBM	July	120
One Machine Replaces Many, Slashes Rework	July	121
Machining Center is First Venture into N/C	July	122
N/C Makes a Difference at AMF	July	124
Machining Center Replaces Conventional		
Equipment	July	124
For Precious and Semiprecious Metals	July	126
Product Design Concept Changed by N/C	July	126
Job Shop Feels Gratitude Toward Machining		
Center Development	July	127
Eleven Hours Savings Per Piece—Small Company,		
Big Machine	July	128

Management
Memo

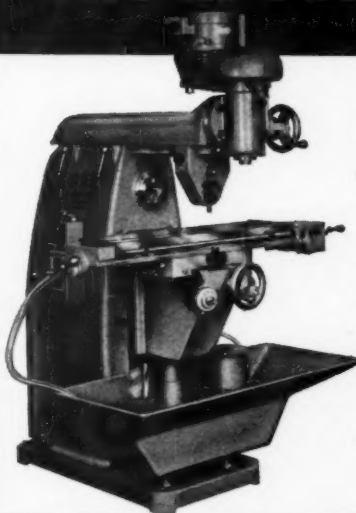
Product Liability and the Machine Tool		
Builder	Jan	69
What Does the Manufacturing Supervisor Have to		
Know About Numerical Control	Feb	97
Industry's Professional Owner-Manager	Mar	81
What Makes a Manager Successful	Apr	75
Start Training Your Managers Now—The Shortage		
Will Be More Intense	May	67
Protection of Plants and Jobs in Riots	June	75



**Management
Memo**
(continued)

The Manufacturing Manager and the Machining Center	July	77
Organizing for Export—How Small-to-Medium Sized Companies Can Participate in Foreign Markets	Aug	75
Do You Have Responsibility without Authority? It's the Nemesis of Managers Everywhere	Sept	73
At Last—A Search for the Key to Numerical Control	Oct	75
Further Notes on the Roll of the Manufacturing Engineer Today	Nov	75

"Two-in-One" Mill



Horizontal and Vertical

Versatility? Here it is in U.S.-Burke's 333 Milling Machine. It's available as a 3 HP horizontal mill with power options, or as a combination unit with 1 HP vertical quill feed head as illustrated. Either way, it is a rugged, all-purpose machine. Send for latest catalog.

THE U.S.-BURKE

division of

1 BROTHERTON ROAD
CINCINNATI, OHIO 45227



Circle 524 on reader information card

Material Handling	Feed-Through Conveyor Utilizing Abrasive Belt Ups Production 400 Percent	Mar	79
Numerical Control	N/C Plus Computer Gives Shop Competitive Edge	Feb	114
	Four-Axis N/C Machining Center Fed From Thirty-Two-Tool Magazine	Apr	106
	Automation Comes to Band Sawing—Card-Controlled Machine Offers Many Advantages	June	98
	Now Multiple-Station Turning by Total Numerical Control	June	103
	N/C Openside Boring and Drilling Machine Solves Many Problems	June	108
	Five-Axis Continuous Path Welding Machines Goes N/C	Oct	128
Protective Finishing	U.S. Navy Saves \$1,000,000 with Selective Plating	Feb	91
	Resistance to Wear and Galling Improved by Tufftriding	Mar	122
	Selective Plating Assures Happy Landings	July	67
	Vacuum Metallizing for Lunar Landings	Oct	109
Reports	Private Versus Organizational Tool Shows	Mar	135
	Eyesight no Prerequisite for Top Quality Performance	Mar	142
	The Dynamic Role of Today's Manufacturing Engineer	Aug	98
	Production Control Clears the Decks	Nov	98
Tool Show Preview	Many New Developments are Exhibited Between Shows	Apr	98
	The 1968 ASTME Engineering Conference and Tool Exposition	Apr	115
	A Welcome from the President of ASTME	Apr	116
	Day-by-Day Highlights of Technical Sessions and Plant Tours	Apr	117
	Technical Conferences and Symposia Have Much to Offer	Apr	124
	Preview of Machines, Tools and Accessories to be Displayed	Apr	134
Washington Roundup	Publicity Turned on the Department of Defense Handling of Machinery and Equipment Loaned to Industry Contractors to Expedite Defense Production	Jan	93
	Uncertainties of Any Election Year	Feb	109
	Inflationary Problem; Competition of Foreign Machine Tool Builders; U.S. Tool Builders Hampered by Wage Differentials; Law Authorizing a Study of the Conversion of U.S. Industrial Might to Metric System	Mar	105
	Congress Cracks Down on the Defense Department's Handling of Machinery and Equipment in the Hands of Defense Contractors	Apr	93

**Washington
Roundup**
(continued)

Increased Business Investment in New Plants and Equipment Contained in Joint Report by U.S. Department of Commerce and Securities and Exchange Commission: A Special Report Portrays Plans for Export, Promotion, How a Giant Export Association Can Work, Eliminating Disappointment Due to Poor Communications and Eliminating Red Tape will Help	May	85
Defense of Factories During Civil Disorders; NTDPMA Answers Inquiries on Where to Find Open-Time on Equipment a Buyer May Need	June	93
Pros and Cons of Converting to Metric System	July	91
Violence, Urban and Racial Crises, and Labor Unrest Reasoning as to Why Now	Aug	93
Accomplishments of 90th Congress	Sept	93
Job Pledges for the Hard-Core; Structural Engineers Exposed to Persuasive Argument Favoring the Use of Steel Bridge Members Fabricated by N/C Machine Tool	Oct	93
Success of Next Administration will be Keyed to Public Confidence; Business Investment not Usually Committed on so Frivolous a Basis	Nov	93

CINCINNATI GILBERT

AIRMIST

ROTARY TABLES



SEYMOUR SAVETINE can index any load centered or offset up to 20,000 lbs. with one hand behind him. Thanks to our patented Airmist indexing system, the table lifts where the load is concentrated. Extra set ups and fine tuning operations are eliminated, production increased and cost reduced. Round, square, and rectangular tops to suit your needs.

Write for Bulletin 668 today.

THE CINCINNATI GILBERT MACHINE TOOL CO. • 3380 BRECKMAN ST. • CINCINNATI, OHIO 45223

Circle 434 on reader information card

Washington Roundup (continued)

Tax-and-Spending Package Finally Made
Itself Felt Dec 93

Welding

Semi-Automatic Welding Speeds Fabrication of
Davit Components June 67
Stud Welding Replaces Three Fastening Steps June 70
Spiral Fins Welded Along Small Tubing at High
Speeds July '67
Electron Beam Repairs Worn Titanium Blades Aug 67
Five-Axis Continuous Path Welding Machine
Goes N/C Oct 128
Corrugated Thinwall Tubing from HF-Welded
Stainless Dec 77

Western Roundup

Machine of Unusual Interest at Arrowhead Products;
Space-Stress Components Turned out at Torrance
Engineering and Manufacturing Corp.; Industrial
Explosion at Los Angeles Jan 95
Chemical Milling is Used in Shaping Almost 60
Percent of the Parts in a Modern Airplane Feb 111
Garrett Corp. Invested 17.5 Million Dollars for New
Plants and Equipment During Past Year; Camtrol,
a New Machine Tool System; Largest Lathe Ever
Built in This Country Mar 109

ASSISTANT NUMERICAL ELECTRONIC CONTROL CO-ORDINATOR

Midwestern Machine Tool Co. in business 30 years, highly successful, producing N/C units primarily for boring, drilling and milling and expanding line with newly developed N/C machine tool units needs Assistant N/C Co-ordinator up to 45 years old, Graduate Electrical Engineer, with knowledge electronic controls and machining operations. Responsibility for marrying various purchased N/C electronic systems to this prime quality machine tool product line. Excellent growth opportunity with young aggressive management group. Attractive salary, profit sharing and fringe benefits. Moving and relocation expenses paid. All replies acknowledged. Send resume and salary information for confidential handling to Management Consultant; c/o MACHINE & TOOL BLUE BOOK; Box 4; Hitchcock Publishing Co.; Wheaton, Illinois 60187

PROJECT DESIGN ENGINEER

Midwestern Machine Tool Co. producing numerically controlled units primarily for boring, milling and drilling and expanding line with newly developed machine tool units needs Project Design Engineer (B.S.M.E. or equivalent) up to 45 years old, whose basic responsibility will be taking assignments involving regular or special design machine tools and working on the board to design a "skeleton" of what is needed. He should be familiar with the machine tool industry and his work record will contain indications of his accomplishment in this industry. He should have a thorough knowledge of standard engineering principles, servo analysis, machine dynamics, structural vibration analysis, etc. and be able to work with and coordinate projects with specialists in these fields. Excellent growth opportunity, attractive salary, profit sharing and fringe benefits. Moving and relocation expenses paid. All replies acknowledged. Send resume and salary information for confidential handling to Management Consultant; c/o MACHINE & TOOL BLUE BOOK; Box 3; Hitchcock Publishing Co.; Wheaton, Ill. 60187.

GOOD GRINDING! FOLLOWS GOOD DRESSING — USE ONLY —

RE-SET-ABLE®, DIAMONDS, LOG-KEY-SET® Shipped Direct or Delivery & Pickup by Mill Supply Jobbers Everywhere. Six Grades. All Sizes . . . \$6 per Karat Credit on Trade. Write or Call for Catalog Sheet and Re-Set Mailing Envelopes. Diamonds Mounted to Suit. Guaranteed to Cut.

DIAMOND TOOL CO. (Not Inc.)
ESTABLISHED 1860 SHELDON M. BOOTH, PRES.
P.O. Box 32, 250 Bway., South Haven, Mich. 49090
Phone: 637-5408 (A/C 616)